

#3



PCT10

RAW SEQUENCE LISTING

DATE: 01/19/2002

PATENT APPLICATION: US/10/019,348

TIME: 11:38:41

Input Set : A:\18176seq.txt

Output Set: N:\CRF3\01192002\J019348.raw

p.5

ENTERED

3 <110> APPLICANT: Nelson, Peter S
 4 Hood, Leroy
 5 Lin, Biaoyang
 7 <120> TITLE OF INVENTION: Prostate-Specific Nucleic Acids
 9 <130> FILE REFERENCE: UOFW-1-18176
 11 <140> CURRENT APPLICATION NUMBER: US/10/019,348
 12 <141> CURRENT FILING DATE: 2001-10-22
 14 <150> PRIOR APPLICATION NUMBER: PCT/US00/10920
 15 <151> PRIOR FILING DATE: 2000-04-21
 17 <150> PRIOR APPLICATION NUMBER: 60/130,778
 18 <151> PRIOR FILING DATE: 1999-04-23
 20 <150> PRIOR APPLICATION NUMBER: 60/151,585
 21 <151> PRIOR FILING DATE: 1999-08-30
 23 <150> PRIOR APPLICATION NUMBER: 60/174,003
 24 <151> PRIOR FILING DATE: 1999-12-30
 26 <150> PRIOR APPLICATION NUMBER: 60/177,751
 27 <151> PRIOR FILING DATE: 2000-01-24
 29 <160> NUMBER OF SEQ ID NOS: 42
 31 <170> SOFTWARE: PatentIn Ver. 2.0
 33 <210> SEQ ID NO: 1
 34 <211> LENGTH: 2538
 35 <212> TYPE: DNA
 36 <213> ORGANISM: Homo sapiens
 38 <220> FEATURE:
 39 <221> NAME/KEY: CDS
 40 <222> LOCATION: (53)..(994)
 42 <400> SEQUENCE: 1
 43 gctggagcat cccgctctgg tgcgctgca gccggcagag atggttgagc tc atg ttc 58
 44 Met Phe
 45 1
 47 ccg ctg ttg ctc ctc ctt ctg ccc ttc ctt ctg tat atg gct gcg ccc 106
 48 Pro Leu Leu Leu Leu Leu Pro Phe Leu Leu Tyr Met Ala Ala Pro
 49 5 10 15
 51 caa atc agg aaa atg ctg tcc agt ggg gtg tgt aca tca act gtt cag 154
 52 Gln Ile Arg Lys Met Leu Ser Ser Gly Val Cys Thr Ser Thr Val Gln
 53 20 25 30
 55 ctt cct ggg aaa gta gtt gtg gtc aca gga gct aat aca ggt atc ggg 202
 56 Leu Pro Gly Lys Val Val Val Thr Gly Ala Asn Thr Gly Ile Gly
 57 35 40 45 50
 59 aag gag aca gcc aaa gag ctg gct cag aga gga gct cga gta tat tta 250
 60 Lys Glu Thr Ala Lys Glu Leu Ala Gln Arg Gly Ala Arg Val Tyr Leu
 61 55 60 65
 63 gct tgc cgg gat gtg gaa aag ggg gaa ttg gtg gcc aaa gag atc cag 298

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/019,348

DATE: 01/19/2002

TIME: 11:38:41

Input Set : A:\18176seq.txt

Output Set: N:\CRF3\01192002\J019348.raw

```

64 Ala Cys Arg Asp Val Glu Lys Gly Glu Leu Val Ala Lys Glu Ile Gln
65          70          75          80
67 acc acg aca ggg aac cag cag gtg ttg gtg cgg aaa ctg gac ctg tct 346
68 Thr Thr Thr Gly Asn Gln Gln Val Leu Val Arg Lys Leu Asp Leu Ser
69          85          90          95
71 gat act aag tct att cga gct ttt gct aag ggc ttc tta gct gag gaa 394
72 Asp Thr Lys Ser Ile Arg Ala Phe Ala Lys Gly Phe Leu Ala Glu Glu
73          100          105          110
75 aag cac ctc cac gtt ttg atc aac aat gca gga gtg atg atg tgt ccg 442
76 Lys His Leu His Val Leu Ile Asn Asn Ala Gly Val Met Met Cys Pro
77 115          120          125          130
79 tac tcg aag aca gca gat ggc ttt gag atg cac ata gga gtc aac cac 490
80 Tyr Ser Lys Thr Ala Asp Gly Phe Glu Met His Ile Gly Val Asn His
81          135          140          145
83 ttg ggt cac ttc ctc cta acc cat ctg ctg cta gag aaa cta aag gaa 538
84 Leu Gly His Phe Leu Leu Thr His Leu Leu Leu Glu Lys Leu Lys Glu
85          150          155          160
87 tca gcc cca tca agg ata gta aat gtg tct tcc ctc gca cat cac ctg 586
88 Ser Ala Pro Ser Arg Ile Val Asn Val Ser Ser Leu Ala His His Leu
89          165          170          175
91 gga agg atc cac ttc cat aac ctg cag ggc gag aaa ttc tac aat gca 634
92 Gly Arg Ile His Phe His Asn Leu Gln Gly Glu Lys Phe Tyr Asn Ala
93          180          185          190
95 ggc ctg gcc tac tgt cac agc aag cta gcc aac atc ctc ttc acc cag 682
96 Gly Leu Ala Tyr Cys His Ser Lys Leu Ala Asn Ile Leu Phe Thr Gln
97 195          200          205          210
99 gaa ctg gcc cgg aga cta aaa ggc tct ggc gtt acg acg tat tct gta 730
100 Glu Leu Ala Arg Arg Leu Lys Gly Ser Gly Val Thr Thr Tyr Ser Val
101          215          220          225
103 cac cct ggc aca gtc caa tct gaa ctg gtt cgg cac tca tct ttc atg 778
104 His Pro Gly Thr Val Gln Ser Glu Leu Val Arg His Ser Ser Phe Met
105          230          235          240
107 aga tgg atg tgg tgg ctt ttc tcc ttt ttc atc aag act cct cag cag 826
108 Arg Trp Met Trp Trp Leu Phe Ser Phe Phe Ile Lys Thr Pro Gln Gln
109          245          250          255
111 gga gcc cag acc agc ctg cac tgt gcc tta aca gaa ggt ctt gag att 874
112 Gly Ala Gln Thr Ser Leu His Cys Ala Leu Thr Glu Gly Leu Glu Ile
113          260          265          270
115 cta agt ggg aat cat ttc agt gac tgt cat gtg gca tgg gtg tct gtc 922
116 Leu Ser Gly Asn His Phe Ser Asp Cys His Val Ala Trp Val Ser Val
117 275          280          285          290
119 caa gct cgt aat gag act ata gca agg cgg ctg tgg gac gtc agt tgt 970
120 Gln Ala Arg Asn Glu Thr Ile Ala Arg Arg Leu Trp Asp Val Ser Cys
121          295          300          305
123 gac ctg ctg ggc ctc cca ata gac taacaggcag tgccagttgg acccaagaga 1024
124 Asp Leu Leu Gly Leu Pro Ile Asp
125          310
127 agactgcagc agactacaca gtacttcttg tcaaaatgat tctccttcaa ggttttcaaa 1084
129 accttagca caaagagagc aaaaccttcc agccttgctt gcttggtgtc cagttaaaac 1144

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/019,348

DATE: 01/19/2002

TIME: 11:38:41

Input Set : A:\18176seq.txt

Output Set: N:\CRF3\01192002\J019348.raw

```

131 tcagtgtact gccagattcg tctaaatgtc tgtcatgtcc agattttactt tgctttctgtt 1204
133 actgccagag ttactagaga tatcataata ggataagaag accctcatat gacctgcaca 1264
135 gctcattttc cttctgaaag aaactactac ctaggagaat ctaagctata gcagggatga 1324
137 tttatgcaaa tttgaactag cttctttgtt cacaattcag ttctctccaa ccaaccagtc 1384
139 ttcacttcaa gagggccaca ctgcaacctc agcttaacat gaataacaaa gactggctca 1444
141 ggagcagggc ttgccaggc atggtggatc accggaggtc agtagttcaa gaccagcctg 1504
143 gccaacatgg tgaaacccca cctctactaa aaattgtgta tatctttgtg tgtcttctctg 1564
145 tttatgtgtg ccaaggagat attttcacaa agttcaaaac agccacaata atcagagatg 1624
147 gagcaaacca gtgccatcca gtctttatgc aaatgaaatg ctgcaaaggg aagcagattc 1684
149 tgtatatgtt ggtaactacc caccaagagc acatgggtag caggggaagaa gtaaaaaaag 1744
151 agaaggagaa tactggaaga taatgcacaa aatgaaggga ctagttaagg attaactagc 1804
153 cctttaagga ttaactagtt aaggattaat agcaaaagat attaaatatg ctaacatagc 1864
155 tatggaggaa ttgagggcaa gcacccagga ctgatgaggt cttacacaaa accagtgtgg 1924
157 caaaaaaaaa aaaaaaaaaa aaaaaaaaaa atcctaaaaa caaacacaaa aaaaaacaa 1984
159 ttcttcattc agaaaaatta tcttagggac tgatattggt aattatggtc aatttaataa 2044
161 tattttgggg catttcctta cattgtcttg acaagattaa aatgtctgtg ccaaaatttt 2104
163 gtattttatt tggagacttc ttatcaaaag taatgctgcc aaaggaagtc taaggaatta 2164
165 gtagtgttcc catcacttgt ttggagtgtg ctattctaaa agattttgat ttcttggaa 2224
167 gacaattata ttttaacttt ggtgggggaa agagttatag gaccacagtc ttcacttctg 2284
169 atacttgtaa attaatcttt tattgcactt gttttgacca ttaagctata tgtttagaaa 2344
171 tggtcatttt acggaaaaat tagaaaaatt ctgataatag tgcagaataa atgaattaat 2404
173 gttttactta atttatattg aactgtcaat gacaaataaa aattcttttt gattattttt 2464
175 tgttttcatt taccagaata aaaactaaga attaaaagtt tgattacagt caaaaaaaaa 2524
177 aaaaaaaaaa aaaa 2538

```

180 <210> SEQ ID NO: 2

181 <211> LENGTH: 314

182 <212> TYPE: PRT

183 <213> ORGANISM: Homo sapiens

185 <400> SEQUENCE: 2

```

186 Met Phe Pro Leu Leu Leu Leu Pro Phe Leu Leu Tyr Met Ala
187 1 5 10 15
189 Ala Pro Gln Ile Arg Lys Met Leu Ser Ser Gly Val Cys Thr Ser Thr
190 20 25 30
192 Val Gln Leu Pro Gly Lys Val Val Val Val Thr Gly Ala Asn Thr Gly
193 35 40 45
195 Ile Gly Lys Glu Thr Ala Lys Glu Leu Ala Gln Arg Gly Ala Arg Val
196 50 55 60
198 Tyr Leu Ala Cys Arg Asp Val Glu Lys Gly Glu Leu Val Ala Lys Glu
199 65 70 75 80
201 Ile Gln Thr Thr Thr Gly Asn Gln Gln Val Leu Val Arg Lys Leu Asp
202 85 90 95
204 Leu Ser Asp Thr Lys Ser Ile Arg Ala Phe Ala Lys Gly Phe Leu Ala
205 100 105 110
207 Glu Glu Lys His Leu His Val Leu Ile Asn Asn Ala Gly Val Met Met
208 115 120 125
210 Cys Pro Tyr Ser Lys Thr Ala Asp Gly Phe Glu Met His Ile Gly Val
211 130 135 140
213 Asn His Leu Gly His Phe Leu Leu Thr His Leu Leu Leu Glu Lys Leu
214 145 150 155 160

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/019,348

DATE: 01/19/2002

TIME: 11:38:41

Input Set : A:\18176seq.txt

Output Set: N:\CRF3\01192002\J019348.raw

```

216 Lys Glu Ser Ala Pro Ser Arg Ile Val Asn Val Ser Ser Leu Ala His
217                               165                               170                               175
219 His Leu Gly Arg Ile His Phe His Asn Leu Gln Gly Glu Lys Phe Tyr
220                               180                               185                               190
222 Asn Ala Gly Leu Ala Tyr Cys His Ser Lys Leu Ala Asn Ile Leu Phe
223                               195                               200                               205
225 Thr Gln Glu Leu Ala Arg Arg Leu Lys Gly Ser Gly Val Thr Thr Tyr
226                               210                               215                               220
228 Ser Val His Pro Gly Thr Val Gln Ser Glu Leu Val Arg His Ser Ser
229 225                               230                               235                               240
231 Phe Met Arg Trp Met Trp Trp Leu Phe Ser Phe Phe Ile Lys Thr Pro
232                               245                               250                               255
234 Gln Gln Gly Ala Gln Thr Ser Leu His Cys Ala Leu Thr Glu Gly Leu
235                               260                               265                               270
237 Glu Ile Leu Ser Gly Asn His Phe Ser Asp Cys His Val Ala Trp Val
238                               275                               280                               285
240 Ser Val Gln Ala Arg Asn Glu Thr Ile Ala Arg Arg Leu Trp Asp Val
241                               290                               295                               300
243 Ser Cys Asp Leu Leu Gly Leu Pro Ile Asp
244 305                               310
247 <210> SEQ ID NO: 3
248 <211> LENGTH: 3966
249 <212> TYPE: DNA
250 <213> ORGANISM: Homo sapiens
252 <220> FEATURE:
253 <221> NAME/KEY: CDS
254 <222> LOCATION: (57)..(1535)
256 <400> SEQUENCE: 3
257 gtcattatga acattccaga tacctatcat tactcgatgc tgttgataac agcaag atg 59
258                                         Met
259                                         1
261 gct ttg aac tca ggg tca cca cca gct att gga cct tac tat gaa aac 107
262 Ala Leu Asn Ser Gly Ser Pro Pro Ala Ile Gly Pro Tyr Tyr Glu Asn
263                               5                               10                               15
265 cat gga tac caa ccg gaa aac ccc tat ccc gca cag ccc act gtg gtc 155
266 His Gly Tyr Gln Pro Glu Asn Pro Tyr Pro Ala Gln Pro Thr Val Val
267                               20                               25                               30
269 ccc act gtc tac gag gtg cat ccg gct cag tac tac ccg tcc ccc gtg 203
270 Pro Thr Val Tyr Glu Val His Pro Ala Gln Tyr Tyr Pro Ser Pro Val
271                               35                               40                               45
273 ccc cag tac gcc ccg agg gtc ctg acg cag gct tcc aac ccc gtc gtc 251
274 Pro Gln Tyr Ala Pro Arg Val Leu Thr Gln Ala Ser Asn Pro Val Val
275 50                               55                               60                               65
277 tgc acg cag ccc aaa tcc cca tcc ggg aca gtg tgc acc tca aag act 299
278 Cys Thr Gln Pro Lys Ser Pro Ser Gly Thr Val Cys Thr Ser Lys Thr
279                               70                               75                               80
281 aag aaa gca ctg tgc atc acc ttg acc ctg ggg acc ttc ctc gtg gga 347
282 Lys Lys Ala Leu Cys Ile Thr Leu Thr Leu Gly Thr Phe Leu Val Gly
283                               85                               90                               95

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/019,348

DATE: 01/19/2002

TIME: 11:38:41

Input Set : A:\18176seq.txt

Output Set: N:\CRF3\01192002\J019348.raw

```

285 gct gcg ctg gcc gct ggc cta ctc tgg aag ttc atg ggc agc aag tgc 395
286 Ala Ala Leu Ala Ala Gly Leu Leu Trp Lys Phe Met Gly Ser Lys Cys
287      100      105      110
289 tcc aac tct ggg ata gag tgc gac tcc tca ggt acc tgc atc aac ccc 443
290 Ser Asn Ser Gly Ile Glu Cys Asp Ser Ser Gly Thr Cys Ile Asn Pro
291      115      120      125
293 tct aac tgg tgt gat ggc gtg tca cac tgc ccc ggc ggg gag gac gag 491
294 Ser Asn Trp Cys Asp Gly Val Ser His Cys Pro Gly Gly Glu Asp Glu
295 130      135      140      145
297 aat cgg tgt gtt cgc ctc tac gga cca aac ttc atc ctt cag atg tac 539
298 Asn Arg Cys Val Arg Leu Tyr Gly Pro Asn Phe Ile Leu Gln Met Tyr
299      150      155      160
301 tca tct cag agg aag tcc tgg cac cct gtg tgc caa gac gac tgg aac 587
302 Ser Ser Gln Arg Lys Ser Trp His Pro Val Cys Gln Asp Asp Trp Asn
303      165      170      175
305 gag aac tac ggg cgg gcg gcc tgc agg gac atg ggc tat aag aat aat 635
306 Glu Asn Tyr Gly Arg Ala Ala Cys Arg Asp Met Gly Tyr Lys Asn Asn
307      180      185      190
309 ttt tac tct agc caa gga ata gtg gat gac agc gga tcc acc agc ttt 683
310 Phe Tyr Ser Ser Gln Gly Ile Val Asp Asp Ser Gly Ser Thr Ser Phe
311      195      200      205
313 atg aaa ctg aac aca agt gcc ggc aat gtc gat atc tat aaa aaa ctg 731
314 Met Lys Leu Asn Thr Ser Ala Gly Asn Val Asp Ile Tyr Lys Lys Leu
315 210      215      220      225
317 tac cac agt gat gcc tgt tct tca aaa gca gtg gtt tct tta cgc tgt 779
318 Tyr His Ser Asp Ala Cys Ser Ser Lys Ala Val Val Ser Leu Arg Cys
319      230      235      240
321 tta gcc tgc ggg gtc aac ttg aac tca agc cgc cag agc agg atc gtg 827
322 Leu Ala Cys Gly Val Asn Leu Asn Ser Ser Arg Gln Ser Arg Ile Val
323      245      250      255
325 ggc ggt gag agc gcg ctc ccg ggg gcc tgg ccc tgg cag gtc agc ctg 875
326 Gly Gly Glu Ser Ala Leu Pro Gly Ala Trp Pro Trp Gln Val Ser Leu
327      260      265      270
329 cac gtc cag aac gtc cac gtg tgc gga ggc tcc atc atc acc ccc gag 923
330 His Val Gln Asn Val His Val Cys Gly Gly Ser Ile Ile Thr Pro Glu
331      275      280      285
333 tgg atc gtg aca gcc gcc cac tgc gtg gaa aaa cct ctt aac aat cca 971
334 Trp Ile Val Thr Ala Ala His Cys Val Glu Lys Pro Leu Asn Asn Pro
335 290      295      300      305
337 tgg cat tgg acg gca ttt gcg ggg att ttg aga caa tct ttc atg ttc 1019
338 Trp His Trp Thr Ala Phe Ala Gly Ile Leu Arg Gln Ser Phe Met Phe
339      310      315      320
341 tat gga gcc gga tac caa gta caa aaa gtg att tct cat cca aat tat 1067
342 Tyr Gly Ala Gly Tyr Gln Val Gln Lys Val Ile Ser His Pro Asn Tyr
343      325      330      335
345 gac tcc aag acc aag aac aat gac att gcg ctg atg aag ctg cag aag 1115
346 Asp Ser Lys Thr Lys Asn Asn Asp Ile Ala Leu Met Lys Leu Gln Lys
347      340      345      350
349 cct ctg act ttc aac gac cta gtg aaa cca gtg tgt ctg ccc aac cca 1163

```

Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

VERIFICATION SUMMARY

DATE: 01/19/2002

PATENT APPLICATION: US/10/019,348

TIME: 11:38:42

Input Set : A:\18176seq.txt

Output Set: N:\CRF3\01192002\J019348.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:702 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:1564 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:1584 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:1676 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20